

# EVALUATION OF THE LEVEL OF MOLDOVA'S ECONOMIC SECURITY IN THE PROCESS OF EUROPEAN INTEGRATION

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## Abstract

*Currently, the analysis of the modern concept of economic security and different economic approaches to economic security of the state became as urgent as it has never been earlier. The modern concept of economic security is understood as the state of the economic system that allows it to develop in a sustainable, dynamically way and to solve the problems so that the state will have the possibility to develop and to implement effectively its economic objectives. Thus, we found out that economic security can be analysed throughout two main approaches: microeconomic and macroeconomic. Both approaches focus on main macroeconomic indicators that we had as an aim to analyse and to quantify the general economic security. Despite the quantitative indicators, we concluded that there are three most important qualitative indicators: economic independence; the economic stability and sustainability; the ability to progress. These are crucial in a rapidly developing world.*

*Keywords: economic security, risks, economic vulnerabilities, threats, critical thresholds*

## Introduction

Economic security is a set of internal and external conditions that contribute to the efficient dynamic growth of the national economy, its ability to meet the needs of society, state, and individual in order to ensure competitiveness on foreign markets, guaranteeing all types of threats and losses. It should be noted that the impact of external threats and the majority of internal ones on the economic security of the Republic of Moldova are manifested firstly at the state border. Consequently, the full range of measures to protect the country's economic interests should be carried out primarily in the border area of the country.<sup>1</sup>

## 1. Main approaches for analysing economic security

Economic security is often defined in general terms, as follows: "economic security of one or another system is meant the sub-system status which provides

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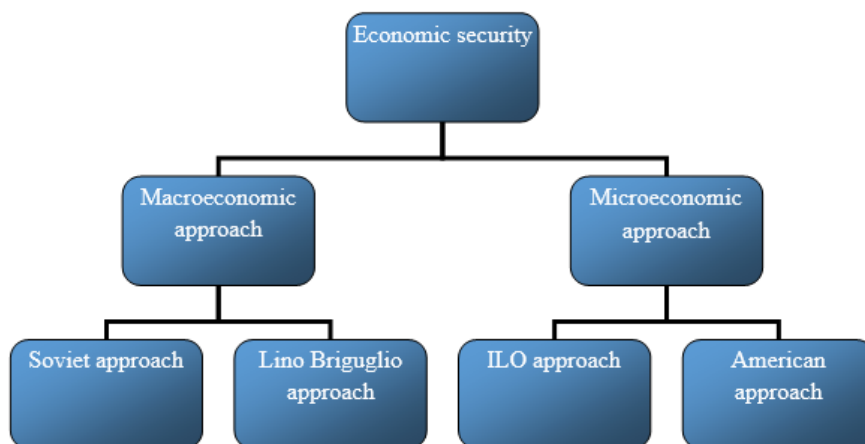
the ability to achieve the purpose of the whole system” (Tambovtev, 1995; Senceagov, 2002). From the other side, B. Buzan mentioned that “the term “economic security” has undergone numerous changes in the last 50 years and now, economic security is to ensure the welfare of the future.” (Buzan, 1984). However, we can notice that these definitions are general ones and underlines that economic security is more dependent on the production potential and economic growth is a result of effectively promoted economic policies.

A significant influence on the process of economic security quantification plays the component indicators and their dynamics over time. Evaluation of the main indicators characterizing the economic security lets out some moments that can reduce the vulnerability of the national economy (Munteanu, 2015).

Based on the economic literature we distinguish two approaches:

- Microeconomics – high standards of living for citizens;
- Macroeconomic – increasing the national economic power. (Figure 1)

**Figure 1. The main approaches in the economic security quantification process**



Source: Munteanu, 2016

The Soviet approach uses the methodology of „ceiling” or threshold indicators. These indicators are used to mark the limits of that indicator and to find the level of overall economic security. In the opinion of all researchers in the field of economic security, the indicators characterize the limits, the ignorance of which „hinders the normal development of the economy and of the social sphere and leads to the formation of destructive tendencies in the sphere of production and the quality of life.” (Kovaleva and Kuklina, 2003 p. 455). In case of violation of the critical level, the sustainable economic development of the state may be disturbed.

**Table 1. The Soviet approach: Evolution of the main macroeconomic indicators for the period 2014, 2016**

Indicator	Critical threshold	2014	2016
GDP/cap, \$	17 719	2 505	1 913
Inflation, %	20	5.1	6.4
Share of underground economy in GDP, %	15-20	27.7	38
<b>Trade Security</b>			
% of exports in GDP	70	42.1	43.3
% of imports in GDP	60	79.8	71.8
% of 3 product groups imported from total imports	30-35	22.8	59.1
% of 3 product groups exported from total exports	20-25	27.3	58.5
Main export partner, %	25-30	18.55 (Ro)	25.1 (Ro)
Main import partner, %	15-20	15.1 (Ro)	13.7 (Ro)
% of re-export from total exports	20-25	34.6	34
<b>Energetic Security</b>			
Net import of energy resources (% from total consumption)		89	70.8
<b>Financial Security</b>			
% Gross state debt in GDP	25	32	38
% Budget deficit in GDP	-3	-2	-1.8
<b>Social Security</b>			
Unemployment, %	7	3.9	4.4
Life expectancy	70	69	71.2
Education expenses, % from GDP	10	8.35	6.32
Difference between incomes of 10% richest and 10% poorest	x 8	x 7	x 4
% of R&D expenses in GDP	2	0.35	0.37

Source: own representation based on data from National Bureau of Statistics

The obtained results indicate that the Republic of Moldova is going through the economic transition period due to the delay of structural reforms and strong macroeconomic shocks. The year 2000 showed signs of a slight recovery of the economy on the background of inflation's decrease. The average GDP growth rate before the global economic crisis in the period 2000-2008 was 5.9%. However, the global economic crisis has considerably affected the immediate outlook of the Republic of Moldova. In 2009, Moldova experienced an economic fall of 6.5%, but 2010 brought a particularly good economic increase of 6.9%.

However, the Moldovan economy shows some signs of recovery: increasing investment in fixed assets, increasing foreign trade, increasing public revenues and expenditures, etc. Real wage growth and economic growth in the real sector: agriculture, industry, transport services, etc., money transfers from abroad have led to increased consumption. At the same time, the appreciation of the national

currency and the intensification of the inflationary process continue. Vulnerability to external factors remains current.

The process of the evolution of the Moldovan economy is vulnerable and slow due to the whole list of shocks, internally as well as externally, with which it is confronted. In conclusion, we will note that the method of analysing threshold indicators is of great practical importance in the process of assessing the level of economic security. These indicators as a whole scans the country's economic situation and equally indicates the level of security. This method makes it possible to determine the state and identify ways to improve the economic security of the Republic of Moldova.

The approach of Lino Briguglio, a professor at the University of Exeter, UK, has two dimensions: economic vulnerability and resilience. The scientific community accepts this methodology because it includes policy analysis and efficiency framework to promote reforms in economies studied.

The most complex methodology, from the microeconomic approach, is the calculation of the economic security index according to the World Labor Organization. Seeing evolution in time, we categorize that the contemporary economic security studies (after the cold war) uses the Anglo-Saxon approach, which is based on the report of the world Organization of labour. It launched methodology of calculating an economic security index (ESI), starting from the identification of the 7 dimensions that make up the socio-economic security. Each of these dimensions is quantified through an index, calculated based on other variables, Economic Security Index (ESI) (Annex 1) is calculated according to the formula:

$$ESI = LMSI + EPSI + JSI + SSI + WSI + 2 * RSI + 2 * ISI \quad (1)$$

where: LMSI – Labour Market Security Index

EPSI – Employment Security Index

WSI – Work Security Index

ISI – Income Security Index

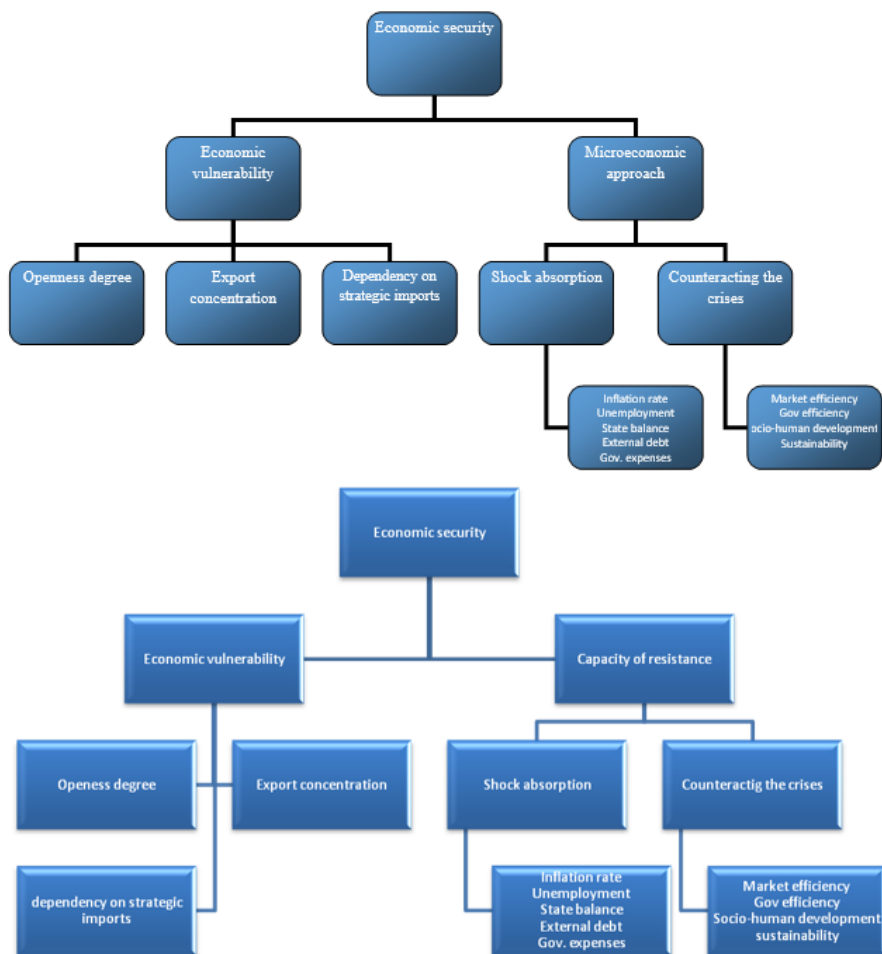
RSI – Representation Security Index

SSI – Skill Reproduction Security Index

JSI – Job Security Index

Income Security Index and the Representation Security Index are offered a double share, because it is presumed that basic income and voice representation stands as fundamental for economic security of any person. These two complement each other, and together are essential for equal good opportunity to pursue occupation.



**Figure 2. Economic security quantification model (Lino Briguglio)**

Source: own representation based on Briguglio (2008)

**Table 2. Economic security and its components (ILO approach)**

Country	LMSI	EPSI	WSI	ISI	RSI	SSI	JSI	ESI	Place in the world (out of 96 states)	Economic security category
Sweden	0,955	0,951	0,938	0,912	0,995	0,888	0,811	0,977	1	Etalon
Finland	0,862	0,960	0,931	0,868	0,921	0,863	0,940	0,947	2	Etalon
Norway	0,981	0,762	0,940	0,941	0,910	0,863	0,750	0,926	3	Etalon
.....										
Latvia	0,662	0,544	0,633	0,694	0,571	0,652	0,615	0,587	27	Etalon
Lithuania	0,593	0,475	0,665	0,622	0,563	0,686	0,673	0,556	30	pragmatics
Ukraine	0,511	0,594	0,569	0,590	0,535	0,655	0,633	0,524	35	Much to do
Rep. of Moldova	0,622	0,477	0,432	0,624	0,516	0,623	0,526	0,495	43	Much to do

Country	LMSI	EPSI	WSI	ISI	RSI	SSI	JSI	ESI	Place in the world (out of 96 states)	Economic security category
Romania	0,616	0,417	0,590	0,514	0,527	0,589	0,483	0,456	44	Much to do
.....										
Nepal	0,295	0,114	0,138	0,340	0,289	0,132	0,126	0,051	90	Much to do

Source: International Labor Organization, 2004<sup>2</sup>

## The American approach

This approach is completely different from the previous ones. For having the whole “picture” we’ll present shortly it in this paragraph. Index of Economic Security (ISE) is a part of the microeconomic approach that measures the rate of American citizens is a decrease of 25% of disposable income family, or because of a decrease in income or an increase in medical expenses or a combination of both, and that have a lack of adequate financial security to deal with these situations. A higher ISE Index indicates, therefore, a greater insecurity, just like a rising unemployment rate that gives alert signals. ISE is officially calculated from 1986 to 2013 on the basis of current survey data, the Census Bureau’s official source for measuring poverty and unemployment. Because ISE is a conceptual framework, however, it can be measured from multiple sources. Previously, ISE was calculated using the Income Survey and Participation Program, another data source is the Census Bureau, which has data since 1985. In addition, a more limited version of the index is available using the Income Dynamics Study Panel, which dates back to the late 1960s. ISE itself includes the real economic losses of the population, not those who fear or are vulnerable to certain threats. The threat of such losses is real and becomes more and more dangerous for all Americans (Munteanu, 2016).

Economic security is a general concept that can be the subject of interpretations. However, several convergent approaches make it possible to faithfully determine which countries have a higher level of economic security and are more vulnerable. In this respect, we have developed an econometric model to identify the factors that influence the level of economic security and the measure to which each factor influences economic security. In order to achieve such a model, a necessary condition is the identification of a dependent variable – which would embody, by its value, the level of economic security of a country at a given moment. At the same time, using the Briguglio model, we will analyse which components are more relevant to determining economic security and include them as independent variables in the model. For the econometric model, the same components of economic security as described by Briguglio (Briguglio, 2008) will be used, and for each component, the most relevant indicators will be identified. The purpose of the model will ultimately be to show the opportunities for

<sup>2</sup> International Labor Organization (2004), Socio-Economic Security Programme, Economic Security for a Better World.



increasing the level of economic security of the Republic of Moldova, if any of the analysed factors would improve or change.

Various international organizations are currently calculating indicators that describe economic security. Among them are:

- The Economic Security Index proposed by Jacob S. Hacker, Gregory A. Huber, Austin Nichols and others (Hacker, *et al.*, 2012) – is an index of the population's perception of the possible economic losses they have suffered or real inflation (adjusted for inflation) of at least 25% compared to the previous year. The figure is expressed as a percentage of the adult population. It is calculated only for the US at the level of each state.
- The economic security index calculated by the World Labor Organization – is a perception indicator of the safety of individuals at work. It is a composite index that incorporates a number of factors such as (Munteanu and Tamosiuniene, 2015) labour market security index, employment security index, occupational safety index, income safety index, security representation index, skill development security index, and job security index.

In addition to these indicators, there are some more specific related to food security, health security, military security, etc. What is common for the indicators listed above is that they cannot be used to develop the proposed economic model because insufficient data is available at country level for some time periods and because these indicators refer more to the individual aspect of the population than at the macroeconomic level, so it would be difficult to perform a comparative analysis between one of these indicators and other macroeconomic indicators.

A compromise solution is to use a proxy indicator, which substitutes the pointer we are looking for, but it is not available in the required format. The use of proxy indicators in econometric models is a normal and welcomed practice but requires further justification for their use. The proxy indicator means an indicator that measures something similar, sometimes different, but which yields almost identical or similar results to those desired.

The proxy indicator proposed for our model is the Fragile States Index (2015) or FSI – calculated the Fund for Peace. It does not directly measure economic security, but by analysing its values, we can conclude that there is a direct and close link between the values of the FSI and the economic security of different groups of countries. FSI is a composite index, containing 12 secondary indices, divided in 4 categories: (1) Cohesion – Security Apparatus, Factionalized Elites, Group Grievance; (2) Economic – State Legitimacy, Economic Decline, Uneven Economic Development, Human Flight and Brain Drain; (3) Political – Public Services, Human Rights and Rule of Law; (4) Social – Demographic Pressures, Refugees and IDPs, External Intervention. Most of these indicators determine, to a certain extent, the level of economic security of a country.

The main arguments for using FSI in the model as a dependent variable are: (1) there are historical and complete data for a fairly long period to build a robust econometric model; (2) there are country-wide data for all the world's states, including recent ones, such as South Sudan; (3) there is sufficient variability in FSI values for the countries we have planned to analyse.





The former FSI was called the „Failed States Index,” i.e. the Failed States Index, later the term „Failed” was replaced by „Fragile”. Values FSI can be between 12 and 120. At least 12 means the lowest level of fragility, which in fact means a very high stability of the country. On the other hand, higher values, which can reach 120, mean a high degree of vulnerability.

For example, in the latest report of the Fund for Peace organization, published in 2015 (the Fund for Peace, 2015), the most fragile states were designated:

- South Sudan – 114.5
- Somalia – 114.0
- Central African Republic – 111.9
- Sudan – 110.8

These countries have been mentioned as having a very high risk of losing statehood, as demonstrated by the fact that Somalia has practically not been functioning for several years, and Sudan and South Sudan face various problems, even if they have reached to a separation agreement. On the other hand, the states with the smallest values of the FSI in the 2015 report are: Portugal, Germany, the Netherlands, Austria, Canada, Ireland, Australia, New Zealand, Switzerland, Luxembourg, Denmark, Norway and Sweden with values between 20.2 and 29.7, declared sustainable countries; Finland – 17.8 – the only country declared to be very sustainable.

It can be noticed that the FSI, in addition to showing the level of fragility of the state, also determines certain economic security. Higher and more developed countries have lower values for the FSI, while poorer countries, facing conflicts of a different gender, with a poorly developed economy, have much higher FSI. Thus, we will continue to follow the assumption that FSI is a proxy variable for the economic security of a country.

Regarding the construction of the model, in its structure on the right side of the model, we will use the following categories of variables: (1) Dummy variables, including: (i) Regional variables, identifying the country’s membership of an international organization or geographic territory; (ii) Time variables to identify whether in some years the relationship between the FSI and the independent variables has changed significantly compared to the overall situation; (2) continuous variables, according to Briguglio categories: (i) Openness of the economy; (ii) Concentration of exports; (iii) Dependence on strategic imports; (iv) Crisis Response; (v) Shock absorption.

If Briguglio’s model will be considered only variables that are publicly available and provides data for the timeframe and for the list of countries included in the model. Thus, the econometric model will contain panel data, in which each observation represents the values of the variables analysed for a particular year in a given country.

The time horizon taken into account is the 2009-2014 period (6 years), as it is a recent, relevant time span, provides a certain dynamic and variability of the indicators, and the data are available almost entirely for this range. Data for 2015 is





only available for some variables and is not definitive in all cases, so 2015 was not included in the model.

The geographical horizon comprises a list of 28 states, including all ex-USSR states, all the states of the former Yugoslavia, Albania, Hungary, Romania, Bulgaria, the Czech Republic, Slovakia and Poland. What characterizes them is a past with a socialist economy, a transition to a market economy, and the fact that these countries are currently at different stages of economic development and integration into regional structures, such as the European Union, the Euro-Asian, CIS, NATO and others. These countries are relevant to a model in which Moldova is included, as it is a practically complete list of countries with which Moldova could be compared, other countries being much more diverse and / or geographically distant.

In total, the model contains 167 records (the Turkmenistan registration for 2014 was omitted as it contained very few data), 17 continuous variables and a number of dummy variables.

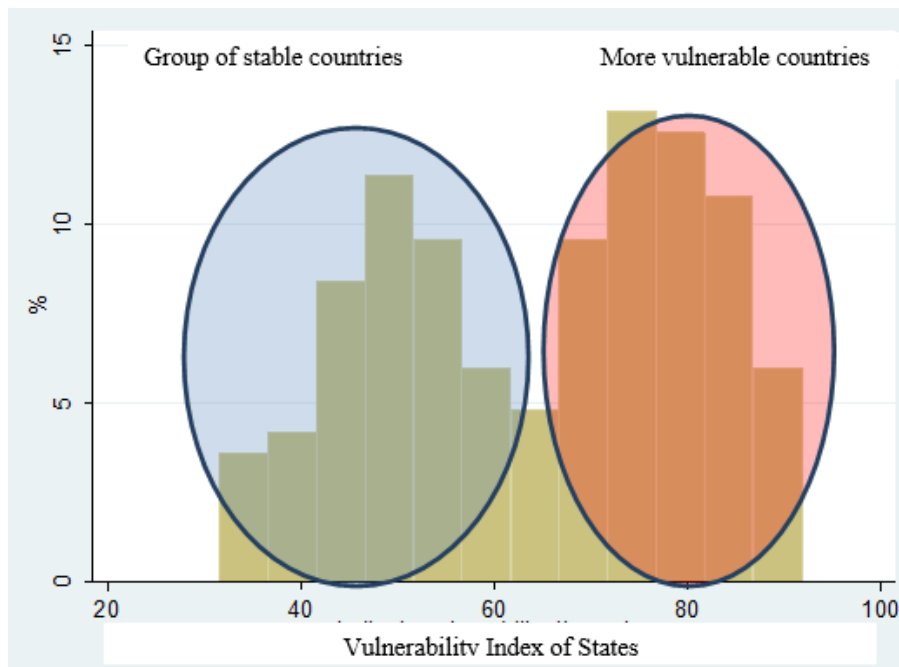
The dummy variables are: 1. EU – belonging to the European Union. In the case of Croatia, for some of the entries, „EU” will be 0 – 2009-2012 and 1 for the period 2013-2014, after joining the EU; 2. NATO – membership of the NATO bloc. For Croatia and Albania will be considered only the years since joining NATO; 3. UV – belonging to the Euro-Asian Customs Union. Armenia and Kyrgyzstan joined in 2014, and Russia, Kazakhstan and Belarus in 2010; 4. Balkans – belonging to the geographical region of the Balkans, includes the countries of the former Yugoslavia and Albania; 5. Baltic – belonging to the geographical region of the Baltic Sea, includes Lithuania, Latvia and Estonia; 6. CSI – membership of the Commonwealth of Independent State. Countries that will have the „0” values for all the dummy variables listed above are former Soviet Union countries that have not joined the EU, the EAA or the CIS; 12. The model uses the Eurasian Customs Union instead of the Eurasian Economic Union because the latter was only set up in 2015; 13. At present, the World Bank uses gross national income per capita instead of GDP per capita for international comparisons, „a1” ... „a6” – dummy time variables for years 2009, 2010, 2011, 2012, 2013 and 2014. The coefficients for these variables will determine whether or not that year had some general influence on FSI.

Continuous variables: (1) The dependent variable: fsi – the state fragility index; (2) independent variables: gdp\_gr – annual real GDP growth, %; gni\_cap13 – Gross National Income per capita; exp\_gdp – the share of exports of goods and services in GDP; bp\_ext\_gdp – external balance of payments in GDP, %; commerce\_pib – share of foreign trade in GDP, %; imp\_pib – the share of imports of goods and services in GDP; imp\_cr – annual import growth, %; exp\_cr – annual export growth, %; rem\_pib – share of received remittances in GDP, %; bp\_pib – balance of current payments in GDP, %; econ\_pib – the share of savings in GDP, %; unemployment – unemployment rate, total, %; inflation – inflation rate, total, %; imp\_ener – energy import rate in total energy consumption; mil\_buget – the share of defense expenditures in the state budget; edu\_pib – the share of spending on education in GDP.



Source data for econometric model developed by the author, are in particular: FSI – organization Fund for Peace, continuous variables – World Bank, Dummy variables – created by author according to official EU, NATO and Eurasian Customs Union reports, for some data were used other public sources and in particular for education and defence budgets for 2013 and 2014 it was considered the same value as in 2012. In order to convince us that there is enough variability in the FSI dependent variable we will analyse its distribution:

**Figure 3. Distribution of FSI values in the econometric model**



Source: own representation

Thus, FSI has values between 31.6 and 91.84 with a mean square deviation of 16.03. From Figure 3 it can be seen that there are two groups of countries: the first with higher stability and the second with a certain vulnerability. Suppose it is the countries of the European Union that form the first group and the other countries – which form the second group.

We will analyse how each regional group influences the FSI value. We will use the Student test to determine if membership of a regional group means that the FSI value is significantly different from the average for the other countries that are not part of this group or not.

Table 3 shows that the countries of the Balkan region are not significant, while membership of other organizations makes the group of countries differ from the rest of the countries by a higher or lower level of the FSI.

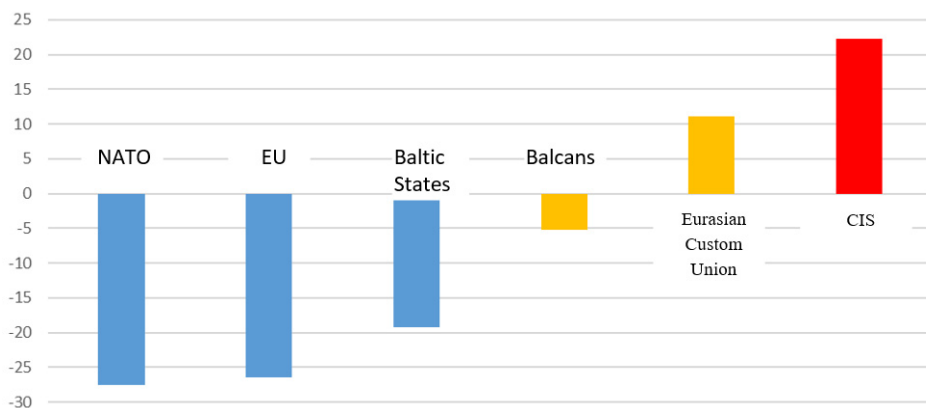
**Table 3. Student Test for comparison of FSI media for a few regional groups compared to other countries' average.**

Regional group	Variable	Number of observations	Average FSI group	Difference from the average of other countries	Value of the t-Student test
CIS	csi	55	79.6	22.2	-11.1
Balcans	balc ani	48	61.0	-5.2	1.9
Baltic states	Balt ica	18	47.5	-19.3	5.2
Eurasian Customs Union	uv	17	74.7	11.1	-2.75
EU	ue	56	47.1	-26.5	16.1
NATO	nato	68	48.3	-27.6	20.6

Source: own representation

Note: \*\*\* – the significance is 0.001 or less, \*\*, – the significance is greater than 0.05

Figure 4 shows that membership of the NATO bloc provides greater security to member countries, even if it is a country that has recently joined NATO, all the NATO member states of the model studied by us joined in 2004 or later. At a short distance, it is a member of the European Union – as a factor of stability and increased economic security.

**Figure 4. The difference between FSI in several groups of countries compared to the FSI average of the other countries included in the econometric model**

Source: own representation

Note: the CIS organization, Republic of Moldova is a member, is in red. The organizations / region of the Baltic countries are hatched in blue

The Baltic Sea group, although coming from the USSR, has a relatively high level of security over the rest of the countries included in the study, many of which

are EU members. Another pole is CIS with increased vulnerability. Something more stable are the countries of the Eurasian customs union.

Student tests on dummy type and FSI variables showed that no individual year is significantly different from the average over the other years. Thus, in the econometric model we will omit the variable „Balkans”, because it does not have a clear influence on FSI and we omit the dummy time variables, from the same reason.

**Table 4. Coefficients of correlation between FSI and the continuous variables in the econometric model.**

<b>gni_cap</b>	<b>exp_pib</b>	<b>comert_pib</b>	<b>bp_ext_pib</b>	<b>imp_pib</b>	<b>imp_energ</b>	<b>bp_pib</b>	<b>somaj</b>
-0.87	-0.60	-0.53	-0.33	-0.32	-0.27	-0.12	-0.03
<b>exp_cr</b>	<b>imp_cr</b>	<b>edu_pib</b>	<b>econ_pib</b>	<b>inflatie</b>	<b>mil_buget</b>	<b>rem_pib</b>	
-0.01	0.01	0.0675	0.15	0.25	0.3639	0.53	

*Source:* own representation

Table 4 shows that the available personal income per capita, the share of exports in GDP, external trade relative to GDP, the external balance of payments versus GDP and the value of GDP-related imports have a reverse link with the FSI, with at least an average. This means, in fact, that they have a positive influence on economic security because the value of the FSI decreases with the increase in the level of stability.

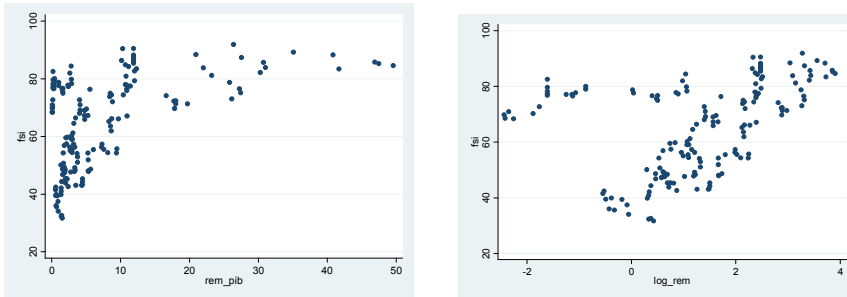
At the same time, inflation, defence spending and remittances have a direct link with the FSI, which means that these indicators raise the vulnerability of states and reduce economic security.

Some indicators, such as the increase in imports or exports, the value of imports into GDP or unemployment are not related to the FSI change. However, these variables will be included in the model for control considerations and because they may have combined effects with other factors.

Linearity of linkage between continuous variables and FSI. To make sure that the link between the FSI and each of the independent variables is linear, we will follow the cloud of points and try to trace some trends.

The link to FSI and remittances is not linear but logarithmic, so in the model we will use the log variable (*rem\_pib*) to linearize the link between FSI and remittances. Figure 5b shows the more linear character of the link, but there are some points that would represent another linear bond. Because we have a fairly small sample, we will not separate these links in two.



**Figure 5 (a, b). The link between FSI and remittances before and after logging**

Source: own representation

With respect to other variables, there was either a quasi-linear relationship or a relatively chaotic distribution of dither cloud.

### Econometric modelling

We will use a classic linear model with panel data (2009-2014 period), where we will control the effect of time and geographic effect. We will build a regression where FSI will be the dependent variable, and the other – independent. To develop the significance level of the model, we will follow the Akaike criterion (AIC) and the determination coefficient R<sup>2</sup>.

From the prepared variables, we will make the following initial selection:

- The share of foreign trade in GDP will be the only foreign trade variable included in the model, as suggested by Briguglio's model. Preliminary analyses have shown that it is a more representative variable compared to the share of exports and the share of GDP import for this model. Also, the increase in imports or exports have proved to be factors that do not significantly affect the FSI.
- We will avoid overlapping geographic regions and we will look at the dummy „ue” and „csi” variables, the third group of countries being those that are neither EU members nor CIS members.
- The balance of payments in GDP correlates strongly with the share of remittances in GDP and the last variable will be retained in the model.

We analysed 3 models (Annex 1) and we will finally consider Model 3 as the best and final with the following:

- The coefficient besides the inflation variable is relatively insignificant ( $p = 0.145$ ), which we want to keep this variable in the model because it is an important factor and we want to keep in mind.
- The coefficient next to the „rem\_pib” variable is also not very significant, but it falls within the error of  $\pm 10\%$  ( $p = 0.08$ ).
- The model suffers from heterozygousness in the independent variables, i.e. there is no constant variation of the errors, increasing with the increase of the values. However, for such a set of data, such a phenomenon is rather characteristic and can be more difficult to correct, because the transformation

of some variables by logarithm is not possible due to the presence of negative values. Other methods could affect the level of interpretation of model data.

- The phenomenon of error self-correlation may be present, but it is not a very powerful one because it is only 6 years of observation. Although the FSI has declined in the environment for this group of countries from 2009 until 2014, however, year-to-year deviations are not very significant, and the evolution of the independent variables could follow another trend.
- There is no multicollinearity, as shown by the inflation index of the variance, which is in the average 1.86 and maximum 2.88. The average of the index below 2 and an individual value below 4 is considered to be very good.
- The remittance variable was used without logarithm because in this case the final model contained more significant variables than the logarithm form.
- According to R2-adjusted, Model 3 better explains the relation between FSI and independent variables, compared to Models 1 and 2. The Akaike criterion (AIC) is also better for Model 3. It is considered to be better AIC if it is smaller, and a better-adjusted R2 is one that has a higher and closest value to 1.

$$FSI = 76.41 + 5.59 * csi - 7.5 * ue + 0.11 * rem_{pib} + 0.18 * econ_{pib} + 0.07 * inflatie + 0.25 * mil_{budget} - 0.05comert_{pib} - 0.0014 * gni_{cap}(2)$$

## Conclusions

The economic security of the country in the current international environment is an important element of the security of the world, in the context of globalization.

For assuring it, we conclude that first of all, the state has to assure its independence (ex: diversification of trade partners, assure a solid and robust financial system, diversify the energy suppliers, etc.). For Republic of Moldova, this can be achieved only through joining a regional union. According to the quantitative research, presented above, if a country is a CIS member, the FSI value increases in the environment by about 5.6 points. In the case of Moldova, the exit from the CIS would mean an improvement in Moldova's rankings in the FSI rankings from 96th to 114th, where „low” countries are. On the other hand, if a country is a member of the EU, an FSI value increases in the environment by about 7.5 points. For Moldova, leaving the CIS and joining the EU would mean a lower FSI of 13.1 points. Moldova could reach the 125th in the ranking in the group of „relatively stable” countries.

Secondly, the economic stability and sustainability needs to be strengthened. There are several economic indicators that can describe the current situation. Republic of Moldova, as many other countries in the world, is dependent on remittances that come daily and mainly have an impact on its consumption. In the model, this indicator shows a direct correlation with the economic security, so that the remittances' weight in GDP of 10% leads to lower economic security, i.e. the FSI, by 1.1 points. The difference is not a very important one, but the negative influence of remittances on economic security is important. Also, the share of savings in GDP has a direct correlation with the FSI, i.e. a higher level of savings



leads to a greater vulnerability of the country. For each 10% of savings in GDP, FSI increases by almost 2 points. Inflation also has a negative impact on economic security. However, the coefficient of 0.072 shows that only very high inflation can significantly affect economic security. Expenditure on defence correlates directly with FSI. Countries that spend more have a higher vulnerability. This could be a consequence, rather than a cause, it is certain that at 10% defense spending, FSI increases by about 2.5 points. Gross national income per capita is the main factor that differentiates countries that are more vulnerable than those with greater economic security. At every 10000 USD / capita in addition, the level of security increases (FSI decreases) by 14.3 points.

Thirdly, the ability to economic progress is the essential ingredient in the process of assuring economic security of a country. This ability is consolidated if the economy is interconnected with others. Opening the economy has a positive influence on the security of the economy. However, the value of the coefficient is also not very high, with only -0.55 declining FSI per percent of foreign trade in GDP.

Finally, the accession of a country to the EU or to the CIS itself involves dramatic changes in security. The econometric model has shown that there is this effect of belonging to an economic / political block, but has also shown that the welfare of the population is even more important.

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**Annex 1.**

<b>Nr.</b>	<b>Indicator</b>	<b>Formula</b>
1	LMSI	whether or not the country has ratified ILO Convention No.122 on Employment Policy, 1964; whether or not the government or constitution of the country has a formal commitment to “full employment”; the existence of an unemployment social security scheme and of legislation banning gender discrimination in recruitment.
2	EPSI	$EPSI = R + N + RB + D + UL$ where R = 1 if the percentage share of the workforce without regular employment contracts was less than 10%, 0 otherwise. N = 1 if the notice period normally given to workers being retrenched was greater than the statutory minimum, 0 otherwise. RB = 1 if the firm provided workers being retrenched with any benefits other than severance pay, 0 otherwise. D = 1 if the number of workers retrenched was less than average for all firms in the previous year, 0 otherwise. UL = 1 if workers were placed on unpaid leave by the enterprise in the three months before the date of remuneration, 0 otherwise.
3	WSI	$WWSI = SAFETY + ACCID + ACC.CL + ACC.D$ where SAFETY = 2 if there was a safety committee and safety department, 1 if there was a safety committee or department, but not both, 0 otherwise; ACCID = 1 if the number of work accidents as a proportion of the workforce was less than the mean average, 0 otherwise. ACC.CL = 1 if there was any accident in the past year that resulted in the closure of the establishment for one day or more, 0 otherwise. ACC.D = 1 if there were any accidents at work that resulted in one or more deaths, 0 otherwise
4	ISI	$Min/Emp + M + AW/Ws + FB$ where Min/Emp = 1 if the percentage of the workforce paid the minimum payment is below 5%, 0 otherwise; M = 1 if the minimum wage exceeded 50% of the average in firm, 0 otherwise; AW/Ws = 1 if the average wage is above sector’s average wage, 0 otherwise; FB = 1 if the firm paid more than eight types of non-wage benefits, 0 otherwise
5	RSI	Thus, a value of 1 is given if the country has ratified Convention No. 87 on Freedom of Association and Protection of the Right to Organise, 1948, and 0 otherwise; a value of 1 is given if it has ratified Convention No. 98 on the Right to Organise and Collective Bargaining, 1949, 0 otherwise, and a value of 1 is given if it has ratified Convention No. 141 concerning Rural Workers’ Organisations, 1975, and their role in economic and social development, 0 otherwise. Fourth, a value of 1 is given if the country’s laws have no restriction on the type of union that can be formed. The reason for this is that national and sectoral unions provide a greater degree of collective representation than is possible when only local or plant-level unions are allowed. Fifth is the existence and coverage of a law on collective bargaining. This has three possible values: 0 if there is no law or other formal instrument on collective bargaining in the country, 1 if such a law exists but with a limited coverage, and 2 if there is a law with near-general coverage
6	JSI	$JSI = SAT1 + SAT2 + SAT3 + PROM1 + PROM2$ where SAT1: If very satisfied or satisfied with nature of work = 1; otherwise 0 SAT2: If very satisfied or satisfied with autonomy/independence = 1; otherwise 0



Nr.	Indicator	Formula
		SAT3: If very satisfied or satisfied with opportunity for promotion = 1; otherwise 0
		PROM1: Promotion in terms of Use of skills = 2 if yes, 1 if “neither promoted nor downgraded”, 0 if downgraded
		PROM2: Opportunity for future promotion in terms of Use of skills = 1 if yes, 0 otherwise

## Annex 2. Results of the models 1-3

Variables	Model 1		Model 2		Model 3	
	Coef.	Significance	Coef.	Significance	Coef.	Significance
csi	6.703	***	6.205	***	5.588	***
ue	-7.402	***	-7.170	***	-7.452	***
pib_cr	-0.051					
rem_pib	0.106		0.114		0.108	
econ_pib	0.207	***	0.188	***	0.180	***
somaj	0.080		0.064			
inflatie	0.068		0.079		0.072	
imp_energ	0.004					
mil_buget	0.228	*	0.240	**	0.248	**
edu_pib	-0.150					
comert_pib	-0.049	**	-0.050	***	-0.050	***
gni_cap	-0.001	***	-0.001	***	-0.00143	***
_cons	75.168	***	74.949	***	76.416	***
<b>Statistics:</b>						
R <sup>2</sup>	0.9034		0.9029		0.9025	
R <sup>2</sup> adj	0.8959		0.8973		0.8975	
AIC	1035.280		1030.231		1028.917	

Notă: \*\*\* – p<0.001, \*\* – p<0.01, \* – p<0.05